

label is not that of Bates. For these reasons, it is assumed that there was a mixup of one sort or another which caused this error, and, therefore, *Lycopodium annotinum* must be eliminated from the flora of Nebraska and the Great Plains. For making the necessary moss determinations I thank Steve Churchill, Botany Department, University of Kansas.—*Ralph E. Brooks, University of Kansas Herbarium, 2045 Avenue A, Campus West, Lawrence, KS 66044.*

CYSTOPTERIS TENNESSEENSIS IN ALABAMA.—The Tennessee Bladder Fern, *C. tennesseensis* Shaver, has been listed as occurring in northeastern Alabama by Dean (Ferns of Alabama, 1969). It was found at the mouth of Nick-a-Jack Cave in Jackson County, just within the state line. Now two additional localities can be reported from the north-central part of the state.

In August 1975, *C. tennesseensis* was found growing around a sinkhole in Morgan County. This locality is in Newsome Sinks, a large lime-sink valley about 20 miles south of Huntsville. The specimens lack the foliar bulblets usually present on plants of *C. tennesseensis* and were identified initially as *C. fragilis* var. *mackayi* Lawson. However, samples were identified recently as *C. tennesseensis* by Dr. W. H. Wagner, Jr. Vouchers (*Short 386*) are deposited at AUA and MICH, and later collections (*Short 887*) from the same locality will be distributed by AUA.

In the summer of 1976, a fern gametophyte with young sporophyte was found growing in damp soil under shrubs at the residence of Dr. William A. Short of Athens, in Limestone County. The development of this plant was observed, and by June 1977 the sporophyte had produced sori characteristic of *Cystopteris* and bulblets characteristic of *C. tennesseensis*. The habitat was unusual for this species; the fern grew in deep soil containing only a few pieces of limestone gravel from a nearby driveway. A voucher (*Short 905*) is deposited at AUA.

Shaver (Ferns of Tennessee, 1954) suggested that *C. tennesseensis* may have originated from hybridization between *C. bulbifera* (L.) Bernh. and *C. protrusa* (Weath.) Blasdell, since many of its characteristics are intermediate between these species. It reproduces by spores as well as bulblets, and probably is an allopolyploid, according to Blasdell (Mem. Torrey Bot. Club 21(4): 51. 1963).

Cystopteris tennesseensis generally grows on damp, shady, calcareous-rock outcrops. It ranges from northern Alabama to Michigan westward to Kansas, mainly in upland physiographic provinces, according to Wherry (The Fern Guide, 1961). It also has been reported on marl outcrops in the coastal plain of North Carolina, according to Radford, Ahles, and Bell (Manual of the Vascular Flora of the Carolinas, 1968), where we observed it in October 1977. The knowledge of this species' distribution in Alabama is still incomplete, but suitable habitats are frequent in the northern counties and occasionally occur in the coastal plain. It can be inferred that *C. tennesseensis* probably is more widely distributed in Alabama than previously has been believed.—*John W. Short and John D. Freeman, Department of Botany and Microbiology, Auburn University Agricultural Experiment Station, Auburn, AL 36830.*